

Title (en)
Apparatus for reducing concentration of carbon monoxide and method of the same

Title (de)
Vorrichtung zur Verminderung der Kohlenstoffmonoxidkonzentration und Verfahren

Title (fr)
Appareil pour réduire la concentration en monoxyde de carbone et procédé

Publication
EP 0833401 A3 20050727 (EN)

Application
EP 97116558 A 19970923

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JP 27411396 A 19960924

Abstract (en)
[origin: EP0833401A2] The structure of the present invention consumes carbon monoxide produced by the reverse shift reaction proceeding in an effective temperature range that ensures a sufficient activity of a catalyst for selective oxidation of carbon monoxide, thus significantly reducing the concentration of carbon monoxide included in a resulting hydrogen-rich gas. A fuel reformer 30 incorporated in a fuel-cells system 10 includes a gas flow sensor 37 disposed in a reformed gas supply conduit 36 that connects a reformer unit 32 with a CO selective oxidizing unit 34. A control unit 70 outputs driving signals to three valves of the CO selective oxidizing unit 34, in response to a detection signal from the gas flow sensor 37. The CO selective oxidizing unit 34 has three reaction chambers filled with a carbon monoxide selective oxidizing catalyst. The number of the reaction chambers, which a reformed gas fed to the CO selective oxidizing unit 34 passes through, is changed by switching the on/off state of the three valves. This structure enables the amount of the carbon monoxide selective oxidizing catalyst to be regulated according to the flow rate of the reformed gas fed to the CO selective oxidizing unit 34. <IMAGE>

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B01J 23/42 (2006.01); **C01B 3/58** (2006.01); **C10K 3/04** (2006.01); **H01M 8/06** (2006.01); **B01J 21/04** (2006.01)

CPC (source: EP US)
C01B 3/583 (2013.01 - EP US); **C10K 3/04** (2013.01 - EP US); **H01M 8/0662** (2013.01 - EP US); **B01J 21/04** (2013.01 - EP US); **B01J 23/42** (2013.01 - EP US); **C01B 2203/044** (2013.01 - EP US); **C01B 2203/047** (2013.01 - EP US); **Y02E 60/50** (2013.01 - EP)

Citation (search report)
• [A] EP 0533232 A1 19930324 - METALLGESELLSCHAFT AG [DE]
• [X] PATENT ABSTRACTS OF JAPAN vol. 1996, no. 08 30 August 1996 (1996-08-30) & US 5658681 A 19970819 - SATO MITSURU [JP], et al
• [X] PATENT ABSTRACTS OF JAPAN vol. 1995, no. 11 26 December 1995 (1995-12-26)

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